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MOBILITIES
2019, VOL. 14, NO. 3, 289–297
https://doi.org/10.1080/17450101.2019.1620510

Routledge
Taylor & Francis Group

From climate migration to anthropocene mobilities: shifting the debate

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KEYWORDS Anthropocene; migration; mobilities; climate change; colonialism; fossil fuels; geology

'The Anthropocene epoch,' as Claire Colebrook describes it, 'appears to mark as radical a shift in species awareness as Darwinian evolution effected for the nineteenth century' (Colebrook 2017). The recent outpouring of ontological speculation on the Anthropocene across the humanities and social sciences certainly testifies to such a radical shift. Dipesh Chakrabarty's insights about the Anthropocene are emblematic (Chakrabarty 2009). The Anthropocene, he argues, marks not only the moment in which the human, *Anthropos*, becomes fully expressed in the Earth System, but also, paradoxically, the moment in which we lose our ability to grasp what it means to be human. Such a perspective captures well a sense in which the Anthropocene marks our passage into a geohistorical interregnum. As we depart from the geologic stability of the Holocene, so we leave behind the conceptual certainties of modernism, not least the fraught separation of Nature and Culture that has underpinned Euro-Western humanism from at least the fifteenth century onwards. Entering now an epoch in which the entanglements of social and geologic life are more and more ratified by the geosciences, it is no wonder that the social sciences and humanities have responded to the Anthropocene thesis by turning to ontological speculation. The Anthropocene is a scary business. Yet while the Anthropocene carries such far-reaching ontological consequences, those writing about it have had surprisingly little to say about the ontological primacy of mobility and movement, the ever-presence of movement in social life, and the insight that mobility is political and thus a fundamental mechanism of social stratification (although notable exceptions include Clark and Yusoff 2017; Colebrook 2017). This is unexpected given that the Anthropocene concept, by re-embedding human ontological awareness in deep time, draws us into ever closer proximity to Earth's geomorphology, its dynamism, its fluidity, the inherent mobility of the Earth system, or what Bronislaw Szerszynski calls 'planetary mobility' (Szerszynski 2016). One of the aims of this special issue of Mobilities on 'Anthropocene Mobilities' is to add to this speculative moment by positioning 'mobility' as a key term of reference for thinking with, through and against, the Anthropocene as either a philosophical problem, a political concept, a material condition, or an epoch of deep time.

But if 'mobility' has been a somewhat muted category within discussions of the Anthropocene, so also it would seem the Anthropocene has been held to the peripheries of the mobility paradigm. A cursory keyword search of *Mobilities*, for example, suggests that concepts of 'Anthropocene', 'climate change' (i.e. impacts) and the 'environment' (i.e., the milieu of bio- and geophysical relations) have all played a relatively minor role in the mobilities paradigm since the inaugural issue of *Mobilities* in 2006 (notable exceptions include Szerszynski 2016; Adey and Anderson 2011; Blitz 2011). In pointing this out, however, we are not suggesting that the mobilities paradigm has been somehow oblivious to global environmental crises. Far from it. Urban transportation infrastructure and energy transition have become increasingly significant research foci within the paradigm, at least

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in recent years. Indeed, considerations of climate change and energy are among the many important legacies left by the British sociologist John Urry, whose contributions and life commitment to the mobilities paradigm are second to none. The category of 'climate refugee' is also of fundamental importance to Mimi Sheller's recent contribution *Mobility Justice*, albeit not unproblematically (Sheller 2018). Our rudimentary keyword search does, however, suggest, at least to us, as newcomers to the field, that the material transmutations implied by global environmental crises, like climate change, the Anthropocene, increasing rates of extinction (Kolbert 2014) – the inescapable reality that climate change stands to effect new patterns of migration and mobility (of flora, fauna, water, fire, etc.) globally – remain peripheral to the ontological primacy of movement that distinguishes the mobilities paradigm from other styles of thought. In other words, from the point of view of our limited understanding of the mobilities literature, 'nature' or 'the environment' appear secondary to mobility rather than as the very material substance through which mobility itself is mediated, experienced, and conceptualised. Thus, a second, but no less significant, motivation for this special issue on the 'Anthropocene Mobilities' is to position the Anthropocene as a key philosophical problem, political category, material condition, and epoch with which to contemplate and understand the social lives revealed to us through the framework of mobility.

In compiling this special issue, our hope is to stimulate dialogue across two important areas of research that appear to us to have been unfolding in recent years in relative isolation. The first is a body of critical research that challenges some of the taken-for-grant assumptions that organise the increasingly institutionalised relation between climate change and human mobility, much of which is occurring within the United Nations Framework Convention on Climate Change, specifically the Warsaw International Mechanism on Loss and Damage. Much of this institutionalised dialogue is fuelled by speculation that climate change will proliferate various forms of human mobility, specifically migration, displacement and resettlement, in ways that threaten international security, yield new humanitarian crises, and tax an already overburdened refugee regime.

The body of critical work we have in mind is more concerned, however, with understanding the relationship between climate change and migration as a relation that requires rigorous explanation rather than as a problem to be solved. Drawing broadly from Marxist, post-structuralist and critical race approaches, it is centrally concerned with questioning how the discourse of climate change and migration operates as a distinctive regime of power within the wider political terrain of climate change (Bettini 2013; Hartmann 2010; Klepp and Chavez-Rodriguez 2018). Our sense is that the mobilities paradigm, the second area of research, might benefit from engaging with such critiques of climate change and migration, if only to deepen the already robust theoretical underpinnings of the mobility justice concept.

Here we have in mind, in particular, Mimi Sheller's thorough elaboration of that concept, which, to us, opens up the terrain of the politics of climate change in very productive ways. In their recent work, *Climate Leviathan*, Joel Wainwright and Geoff Mann argue for 'a robust political language defending the right of people to migrate in anticipation of climate change' (Wainwright and Mann 2018). We are of the view that Sheller's concept of mobility justice would add immeasurably to the development of precisely such a political language, first and foremost by positing movement as *the founding condition of* rather than *the exception to* social life (as would Thomas Nail's *The figure of the migrant*, Nail 2015). And yet, at the heart of Sheller's 'triple mobility crisis' – climate change, urbanisation, and intensified violence directed at refugees – which provides the justification of the mobility justice concept, we find unproblematised usage of the category 'climate refugee' (Sheller 2018, 4). This, to us, inadvertently contributes to the reification of what has been shown to be a troubling political category, even while Sheller situates her articulation of the mobility justice concept within a critique of capitalism, which we feel is all too often obscured from the wider political discourse about climate migration and refugees, including particular strands of 'climate justice' (see also Turhan and Armiero in this issue). What we are pointing towards then is not so much a fundamental misunderstanding on Sheller's part than a missed opportunity to position mobility justice as both a powerful methodological and normative alternative to those who would

approach the relationship between the impacts of climate change and migration as a problem that warrants technical solutions.

The starting point for the dialogue we hope to stimulate with this special issue might begin, for example, with the idea that the mobility justice concept enables us to re-characterise those displaced by 'climate change' not as 'climate refugees', but as displacees of a globalised network of intersecting mobility regimes fuelled by fossil fuel extraction. We explain what we mean by this momentarily. But first, let us briefly outline some of the fundamental shortcomings of the 'climate refugee/climate migration' concept. As Giovanni Bettini outlines in his contribution to this special issue, the overwhelming assumption that underpins this concept is that 'climate change' refers to the bio- and geophysical impacts of climate change, as opposed to a manifestation of capitalism or to a historically produced structural condition. Almost inevitably this assumption prioritises the impacts of climate change in explanations of mobility, while obscuring its historical, indeed its geo-historical, conditions of possibility. It originates in the claim that the world's poor will experience the impacts most acutely (IPCC 2013), and it anticipates that existing patterns of human mobility will be affected by the impacts of climate change. In this way, it assumes that increases in average temperature, changing patterns of precipitation, rising sea levels and extreme weather conditions (Jones and O'Neill 2016) will alter, for example, water supplies, food production, health and economic growth, and thus lead to increasing levels of migration and displacement among the world's poor. Within this conceptual terrain, the ensuing discussion has evolved from one focused on millions of 'climate refugees' (Gemenne 2011; Piguet, Pecoud, and de Guchteneire 2011) into one in which migration is promoted as a possible adaptive response to climate change (McLeman and Smit 2006; Black et al. 2011a).

The problems associated with the 'climate refugee/climate migration' concept are well documented (see Bettini in this issue; Baldwin, Methmann, and Rothe 2014; Fröhlich 2017). The most important is that individual and household migration decisions are highly contextual, with pre-existing migration corridors and the dynamics of economic, political, demographic, social and environmental factors at the origin and destination playing key roles (Black et al. 2011b; Martin, Weerasinghe, and Taylor 2014). What this means is that migration/mobility is irreducible to climate change. It is also the case that mobility takes numerous forms (an obvious point for regular readers of this journal) varying from displacement to (seasonal) labour migration and resettlement on a spectrum of (in)voluntariness depending on whether change is slow, like droughts and land degradation, or fast, as in floods, storms or fires. So adaptive capacity is highly uneven, mediated by intersectional considerations, such as one's position in relation to capital, gender, ethnicity, class, race, and sexuality (see Parks and Pellow in this issue). Human mobility is also spatially and temporally diverse, ranging from short term to permanent and from internal to international. As Kniveton et al. (2008) have shown, long-term and long-distance migration only takes place if a society is highly dependent on the environment for livelihood and if human actions exacerbate the environmental aspects of a disaster. And finally, it is also the case that people affected by climate change often have no access to mobility (Zickgraf and Perrin 2017), a point too often obscured by the 'climate refugee/climate migration' concept, which emphasises mobility over and above immobility.

In light of these shortcomings, the mobility justice concept offers a productive alternative for analysing the relationship between climate change and human mobility. Rather than explaining mobility as a function of the environment, climate, or nature, mobility justice is powerful precisely because it positions capitalism along with its fossil-fuelled infrastructures of air travel, automobility, suburbanisation and consumerism, at the very centre of the concern about climate change and displacement (see Turhan and Armiero in this issue). In other words, the methodological appeal of the mobility justice concept is that it re-prioritises the historical, or perhaps more accurately the *geohistorical*. That is, it stands to prise open, expand, and pluralise the explanatory gap that naturalist explanation seeks to close down. As Thomas Nail (this special issue) puts it, 'the term "climate refugee" itself serves to cover over the real kinopolitical conditions of social circulation at work that make such populations vulnerable to displacement in the first place.' Opposing the focus

on 'climate refugees', several contributions to this special issue demonstrate that much of what today gets labelled 'climate' migration, resettlement, and displacement is actually better conceptualised as the result of colonialism rather than climate (Whyte et al. in this issue; Suliman et al. in this issue; Nail in this issue). This directs us to consider the ways in which Indigenous peoples' mobilities have been structured by settler colonial regimes of social motion, which restrict Indigenous mobility as a precondition for white settlement. But even more powerfully, it calls attention to the Eurocentrism of 'climate change and migration' discourse, and thereby repositions Indigenous knowledges and experiences of mobility as of primary importance for attaining justice in the context of climate change.

But what about the Anthropocene? What difference does *it* make to how we might understand mobility? To answer this question, we start with the observation that the mobility paradigm is a distinctive form of *social* thought. A blend of sociology and cultural geography, its origins can be traced to the spatial turn in social theory dating from the 1990s. In a recent retrospective, Sheller and Urry identify what they consider to be the foundational tenets of the paradigm (Sheller and Urry 2016). Among these is the primacy given to movement as 'constitutive' of the 'workings of most social institutions and social practices' (p.11). Although vastly oversimplifying what has matured into a highly sophisticated, multidimensional field, we take from this that the mobility paradigm is foremost a style of thought which endeavours to explain social life by examining 'different modes of mobilities and their complex combinations' (p.11). 'Social institutions and practices,' Sheller and Urry tell us, 'presuppose contingent assemblies of these diverse mobility forms' (p.11). Sheller and Urry go on to say much more about the mobilities paradigm, not least that mobility is invariably uneven, bound up with issues of power and social stratification. But ultimately their appraisal rests on the claim that social life is an expression of the movements out of which it arises.

Whereas the movements that concern the mobility paradigm are mostly to do with people, objectives, technologies, knowledge, and capital, such tracings remain faithful to the long-held assumption in social theory that 'the environment', as the physical surface of the Earth over which movement is understood to occur, is for the most part inert (see Chandler in this volume). Like other forms of thought, by virtue of its sociological origins, the mobilities paradigm displaces any significant consideration of the *geos* even while all of contemporary life in our globalised world remains fundamentally underpinned by the *geos* – fossil fuels. In their work on geosocial formations, Kathryn Yusoff and Nigel Clark invite us to consider how this assumption results in a diminished understanding of social life, one fundamentally cut-off from the liveliness of Earth itself (Clark and Yusoff 2017). Working from the 'geological' as a site of social formation – hence their concept 'geosocial formations' – their fundamental claim is that the geosciences have important stories to tell us about the violent upheavals and catastrophic transformations that mark the geohistory of the planet. Such 'convulsions,' they remind us, have been 'momentous enough to have reduced entire worlds of biotic life to fossilized remnants in the lithic crust' (p.4). Earth itself is one serious mover and shaker, so much so that when it does convulse it stands to lay bare entire lifeworlds. *Terra mobilis* is the term Clark uses to describe this volatile condition of the place we call Earth. It captures the notion that Earth itself moves, and not just surficially as in tides, weather patterns, or the occasional landslide. But in violently abrupt shifts in climate forceful enough to bring about new forms of life, and indeed, an entirely new earth (see Nail in this issue).

Terra mobilis, we would suggest, has direct implications for the mobility paradigm. One of the promises of the paradigm is that mobility offers a unique perspective on social life. The advent of the Anthropocene, however, forces us to acknowledge that human and non-human forms of mobility are invariably linked – as Stefanie Fishel's article on the problem of roadkill in this issue vividly illustrates. If social theory, including the mobility paradigm, wants to live up to this changing reality, it can no longer afford to ignore the dynamic earth when thinking social life, especially now in the geologic interregnum in which the 'handrails of modernist ideas of rationality and progress' (Chandler 2018, 10) are no longer available to us. Social and political life are, it turns out, too tightly tethered to the Earth System, including its geological underpinnings, for these to remain muted. We wonder then

whether something might be gained by (re)thinking mobility in relation to the dynamic earth. For instance, we wonder if the geosocial formations concept – attending to earth processes, to the geosciences, to the physical properties of the geological subsurface as constitutive of social life – might permit the mobility paradigm some distance from its sociological origins and thereby allow alternative explorations of mobility which attend to how the *geos* and mobility combine to produce social life (critically see Wakefield in this issue). In many ways, this analysis is already present in Clark's concept of *terra mobilis* and in John Urry's rich explorations of energy and social life. But Timothy Mitchell's examinations of coal and carbon democracy offer another entry point (Mitchell 2011). Mitchell argues that the early labour movement in England would not have taken the shape it did were it not for the irreducible physical properties of coal. To be productive, coal needed to be transported by rail to centres of industrial production, where it was combined with other raw materials and labour in the production of infrastructural materials used to sustain industrial and imperial regimes of mobility, shipping, rail, war machines, and later automobiles. Mitchell's point is that the labour movement that arose in relation to coal production in England was enabled by the vast transportation networks required to move coal to places like Newcastle. Workers were well positioned to exploit this vulnerability in the transportation networks of industrial production, shutting them down in order to resist their own exploitation. However, if we reframe Mitchell's story through the mobilities paradigm, we could re-interpret this formative moment of the labour movement within the framework of kinopolitics as a particular moment in an imperial regime of social motion where the expulsion of the proletariat had become a necessary condition for the expansion of empire (Nail 2015). Borrowing from Thomas Nail, workers were, in this sense, not simply workers, but migrants displaced by the energy imperatives required to fuel imperial expansion. And if we place this observation in dialogue with Yusoff and Clarke's concept of geosocial formation, then we might also say that European imperialism is a geohistorical regime of social motion made possible not only by the brutalities of imperial labour, but the physical properties of coal. Without coal, and the emerging discipline that made its extraction possible – that is Geology – empire would not have been possible. And neither would have been possible were it not for the volatile dynamism of the Earth system (Yusoff 2018). This is the challenge, we would suggest, that the Anthropocene presents to the mobilities paradigm: how to think about mobility in a way that remains faithful to the brute fact that mobility in our hyper-capitalist and hyper-extractivist world is invariably bound up with the fortunes and fate of the Earth system.

On the contributions

This special issue started with a workshop which was convened by Delf Rothe and Christiane Fröhlich at the University of Hamburg, Germany, in 2017, bringing together established thinkers of the Anthropocene with critical climate migration scholars.[1] Under the title of 'Anthropocene Mobilities: The Politics of Movement in an Age of Change', the workshop was a collective reflection upon the question of how the notion of the Anthropocene could enrich our understanding of migration and mobility, and the contributors to this special issue all provide preliminary and quite distinctive answers to this question.

The first two contributions of this issue both engage with Indigenous perspectives on environmental change and mobility and demonstrate how these complicate the Western discourse on climate migration outlined above. In their contribution, Samid Suliman, Carol Farbotko, Hedda Ransan-Cooper, Karen McNamara, Fanny Thornton, Celia McMichael and Taukiei Kitara explore the difficult relationship between state-centric climate politics and Indigenous perspectives on climate change, with the latter usually being sidelined. They ask which shape political action takes outside of formal governance spaces and state-led approaches to climate change in the Pacific region. Drawing on the concept of **banua*, they outline contemporary climate change activism in the Indigenous communities of the Pacific Islands, thereby politicising mobility as well as immobility. **banua*, according to Suliman et al., functions like a cosmological compass that connects "people, ancestors,

stars, canoes and other vessels, ocean, islands and continents" in a dynamic and fluid relational network of both mobilities as well as immobilities. *banua is key in safeguarding the Pacific peoples' existential security and their mobility needs and traditions, thereby challenging both the casual subordination of Indigenous peoples, which characterises much of global climate politics, and the lack of engagement with alternative views of (im)mobilities inherent in the global climate agenda.

The second contribution by Kyle Whyte, Julia Gibson, and Jared Talley challenges the oft-expressed belief that climate migration represents a novel phenomenon in the Anthropocene. Other than suggested by the Western discourse on climate migration as catastrophe-to-come, many indigenous communities have in fact long-standing traditions of environmental 'mobility'. Such traditional forms of mobility have been embedded within philosophies that focus on fluid and transformative relationships as constituting the fabric of resilient societies. The contribution shows that colonial forms of power have operated as containment strategies that work to curtail mobility. This perspective troubles much of the contemporary discussion on climate change and migration, in which mobility is often problematized while the historical legacies of the colonial containment of Indigenous peoples are largely ignored. This is highly relevant in the current policy discourse, as the contribution demonstrates with a discussion of recent proposals for resettlement in the Gulf of Mexico and Alaska.

Giovanni Bettini troubles the hegemonic discourse on climate change migration from a different angle – that is Lacanian psychoanalysis. In his contribution, he looks at how the climate-migration nexus raises questions about alternative futures and what it will mean to be human in the coming decades, and what the mobilities concept has to offer in trying to answer them. Drawing an analogy with the Copernican turn of the 17th century and its effects on the then dominant understanding of the 'Anthropos' and its position on planet Earth, he outlines some of the tensions signified by the Anthropocene in the debate about 'climate migration', with the overall goal of understanding why the figures of the climate migrant and climate refugee have become so salient. He then analyses discourses on climate migration drawing on Lacan's idea of the symptom as both a 'return of the repressed' and as 'Sinthome', thereby uncovering the performative elements in the discourse as well as the fields of the sayable and unsayable which they delimit.

Stefanie Fishel's contribution is an excellent example of how the concept of the Anthropocene can enrich our understanding of mobility. Fishel discusses the case of roadkill, as violent encounters between human and non-human forms of mobility, and thus a key figure of the Anthropocene. The problem of roadkill reveals the uneven vulnerabilities and mobilities that characterize existing road infrastructures. Yet, in the modernist gaze of the 'petroleum age,' the death of animals is rendered invisible. Drawing upon the mobilities literature and Foucault's reflection on space in the twentieth century, Fishel articulates an approach of 'living beside and among those who move through space with us' (p. . . .). Fishel introduces and discusses two recent architectural projects that show how human infrastructure can be designed differently to meet the mobility needs of both humans as well as non-human beings. Much more than simply technical fixes, such architecture projects represent interventions in the visual politics of the Anthropocene, that render our entanglement and shared vulnerability with the non-human world visible.

Ethemcan Turhan and Marco Armiero starting point are cities as key sites of contestation in a world in which borders are simultaneously opened – to capital and affluent populations – and violently reinforced – to keep out the global poor. Cities are also increasingly the focus of efforts to curb the effects of climate change as well as origins and destinations for so-called climate migrants/refugees. Drawing on the concepts of urban belonging and right-to-the-world, Turhan and Armiero argue that urban imaginaries like that of solidarity cities can offer a counterpoint to the isolationist fortress nation model, as well as a way simultaneously to approach the challenges caused by climate change and human mobility. They propose that enacting urban citizenship as a mobile commons opens up space for multiple belongings, for new, mobile constellations of a shared life.

The forum 'The migrant climate: the ontopolitics of mobility in the Anthropocene', finally, gets five established thinkers of the Anthropocene (Chandler and Wakefield) and of critical migration studies (Nail, Park and Pellow) in conversation with each other. Each contribution provides a different

perspective on the relation between mobility and the Anthropocene. Together, the pieces challenge our established understanding of the climate-migration nexus and the existing regime of migration control. The first two contributions by Nail and Chandler provide two ways of theorizing mobility in the Anthropocene. Nail's contribution starts with the radical assumption that rather than living in the Anthropocene, we have entered the age of the Kinocene – a planetary epoch characterized by the unprecedented mobility of people, goods, species, minerals, and molecules. Hence, according to him, the ontology of our time has to be the 'ontology of motion'. Such an ontology of motion problematizes the often ahistorical and generalizing category of climate migrants. According to him, humans are geological animals defined by the primacy of movement and mobility, just as the climate is and has always been fundamentally fluid and mobile. To come to terms with the current political crisis that unfolds around the figure of the migrant, he proposes to adopt a kinopolitical perspective. The notion of kinopolitics acknowledges that mobility, movement, and migration are not exceptional to daily existence, but that all three are at the core of what it means to be human today. Current kinopolitical attempts of controlling or interrupting the flow of movement can only reinforce the current political crisis. In the words of Nail, 'the very condition of the designation and cause of the crisis, i.e. stasis, is being proposed as the solution to this same crisis'. As a way out, Nail proposes to learn from migrants in history, including nomads, barbarians, and the *Lumpenproletariat*, who successfully resisted kinopolitical control and domination.

In his contribution to the forum, David Chandler, puts forth an ontological rather than merely ontic politics of mobility. At the ontic level, a politics of mobility in relation to unfolding climate change would be confronted with questions of moving or staying in regions that are vulnerable to sea-level rise or natural disasters. At the ontological level, instead, these questions would become irrelevant. In the Anthropocene, with its ontology of becoming and its inter-relational understanding of space, the binary choice between moving or staying cannot make any sense, according to Chandler. Dwelling upon these theoretical assumptions, he develops a notion of an ontopolitics of mobility, in which resilience – as a mode of embedding oneself in the real-world, real-time flows of the Anthropocene – takes centre stage.

The contributions by Wakefield and Park & Pellow take up these theoretical considerations and both enrich as well as complicate them with empirically informed discussions of the politics of mobility in the Anthropocene. Stephanie Wakefield's case study describes the remarkable resilience of the fishermen of Old River Landing, who in the face of increased flooding decided to go amphibious rather than leave their home. Using Styrofoam blocks and industrial materials, the fishermen rebuilt homes that could float on the water during flood times. Exactly by resisting the urge to migrate, the fishermen regain agency and demonstrate a surprising mobility and adaptability. Wakefield paints the image of a more hopeful Anthropocene, in which humanity is not bound by planetary limits. In the changing climate of the Anthropocene, we would not only see increased migration and displacement, but also novel forms of vertical mobility, 'whereby people, faced with new conditions or exigencies, take control of their lives, move from passive to active, and propel themselves beyond their conditions' (Wakefield in this issue, p. …). Wakefield's observations thus provide an important correction of neo-Malthusian arguments which posit a direct link between environmental changes, resource scarcity and migration.

Lisa Park's and David Pellow's piece engages with the relation between mobility and the Anthropocene through the lens of environmental privilege and environmental justice. Drawing upon the two examples of the city of Aspen and the County of Pitkin, Colorado, they discuss the significance of borders in creating environmental privilege in the Anthropocene. Their observations in these two communities show that greater ecological instability increases efforts to create privatized places as pristine spaces untouched by global turmoil, thereby reinforcing those social forces that produce environmental injustices in the first place. In other words, the environmental privileges enjoyed by some humans in the Anthropocene rest upon the manipulation of the mobility of others – both human and non-human.

Note

1. The website www.anthromob.space provides more information on both the workshop and further developments in our endeavour to bring mobilities and anthropocene scholars into dialogue.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the German Research Foundation (DFG) The Knowledge Politics of Security in the Anthropocene. Project grant No. [335616337]; German Research Foundation (DFG) Cluster of Excellence, Climate System Analysis and Prediction", Hamburg University [CliSAP - EXC177].

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